Lynx 450X Ultra Main Frame

Assembly Manual v1.1

Please read this manual fully before commencing assembly.
Congratulations on your purchase of the Lynx 450X Ultra Main Frame! This main frame adds a whole new dimension to your 450X.
Lightweight, extra rigidity for an insane and crispy fly performance.
Lynx 450X Ultra Main frame is a result of long 3D fly experience and prolonged test.
Every detail and compatibility was strictly checked.

Features:
- Fully compatibility with 450X standard Heli parts and canopy
- Light Weight design.
- Ultra ridged design.
- Increased Battery capability, (3, 4 and 6S) – 1300 to 2300mAh
- Increased rigidity and crash resistance.
- Redesigned CG position for the ultimate 3D fly performance
- Huge compatibility servos, motors, esc and gyro installation.
- Few parts account for easy assembly and maintenance.
- Clean and advanced frame industrial design.

Lynx 450X Ultra Main Frame come partially pre-assembly and an easy to read step-by step user manual for your assembly enjoyment and support.

Items required to complete assembly from your donor 450X:

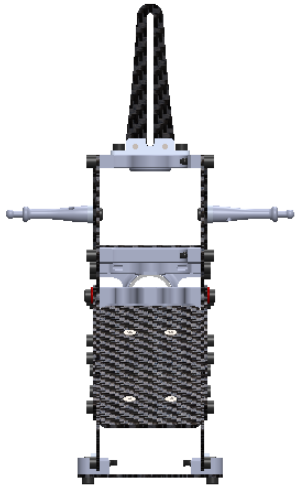
Standard complete tail boom assembly including tail rotor
Standard Main Shaft and Head assembly
Standard Main Gear Hub and tail belt assembly
Standard ESC or updated version – Lynx suggest 40A with switching BEC
Standard Motor or updated version - 29.5 mm Max Out-Case Diameter class.
FBL unit
3 x Standard Size Cyclic Servos or updated version.
1 x Standard Size Tail servo o updated version.

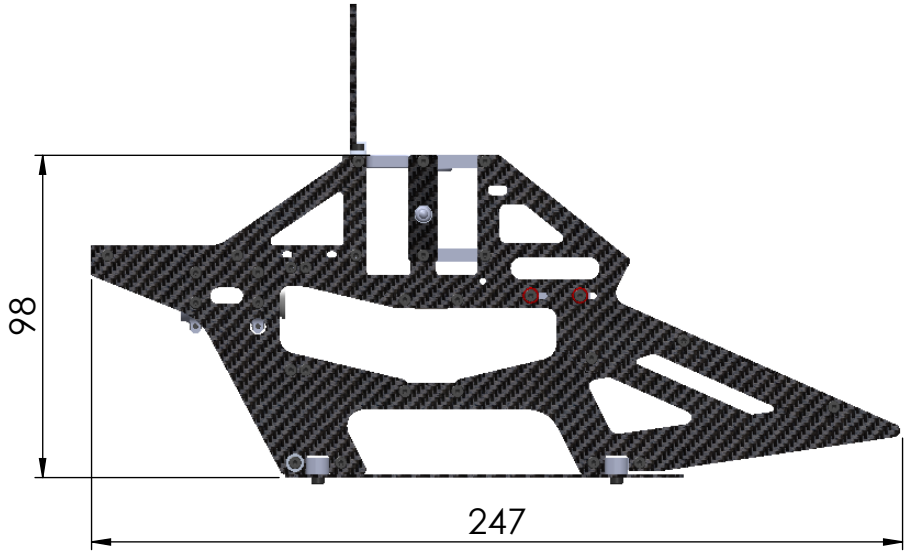
Tools required for assembly:
Allen drivers 1.5 and 2 mm
Philip Cross Tip Screw Driver n. 00
Thread lock – medium

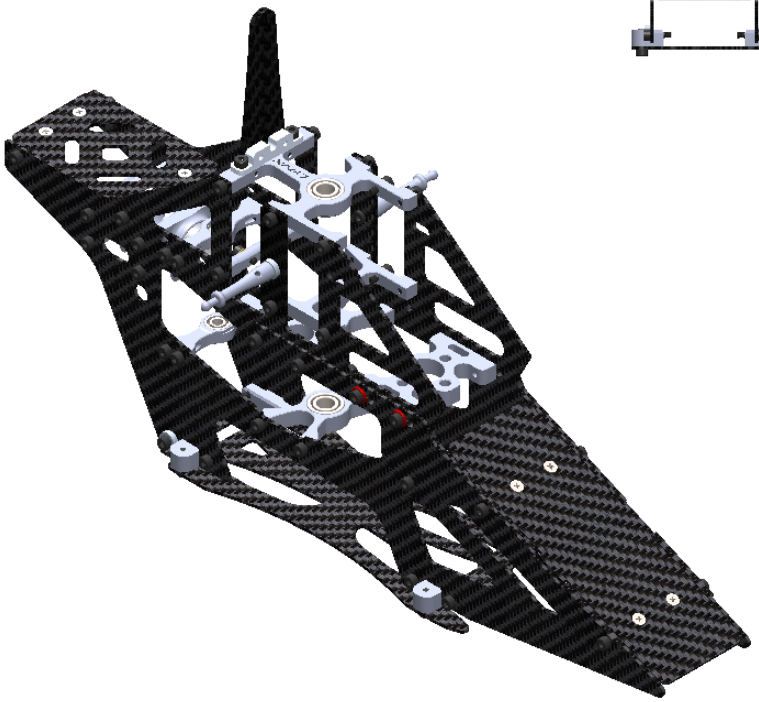
Final servo and radio setup:
We recommend you complete the setup of your FBL unit again from scratch, including leveling all servo arms, setting zero degrees pitch, and all FBL travel adjustments, etc.

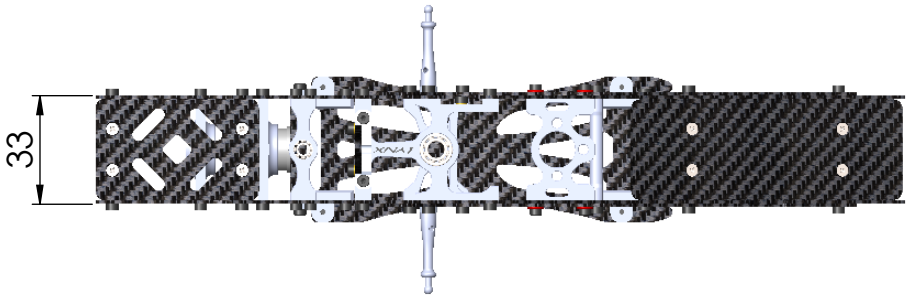
Good luck flying the new 450X with Lynx high performance upgrades system!
For any information or tips don’t hesitate to contact us by e mail at service@lynxheli.com

450X LYNX - ULTRA MAIN FRAME - User Manual

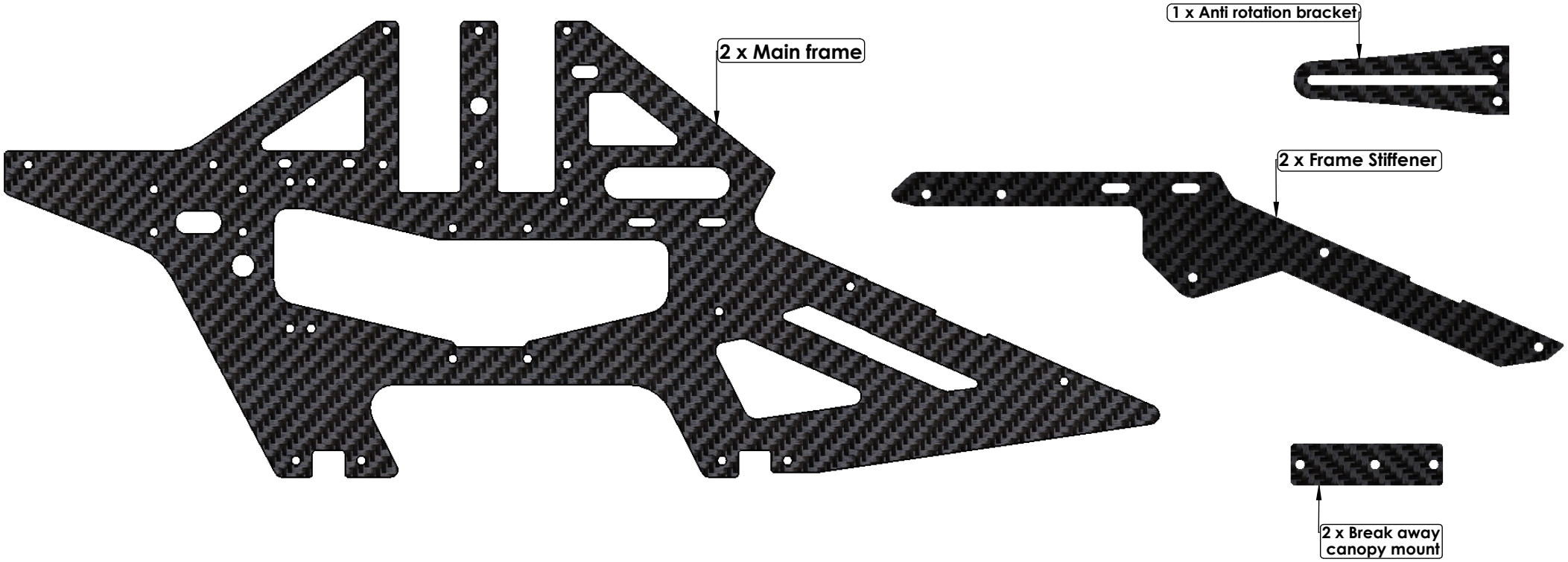


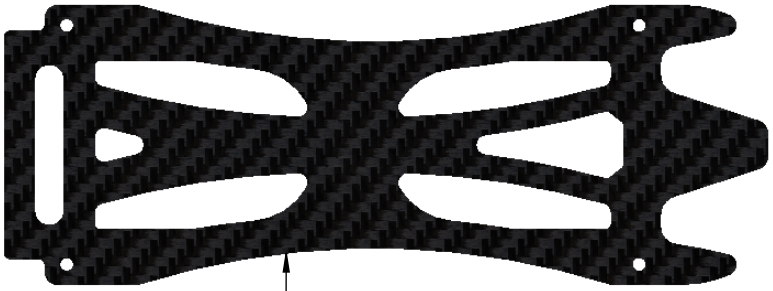


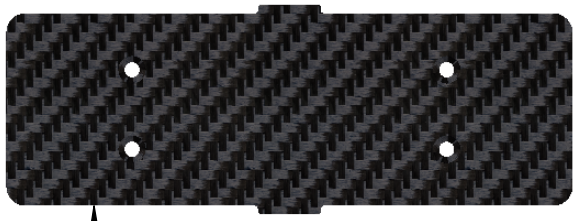


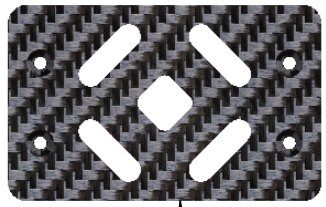


CARBON FIBER KIT PRATS



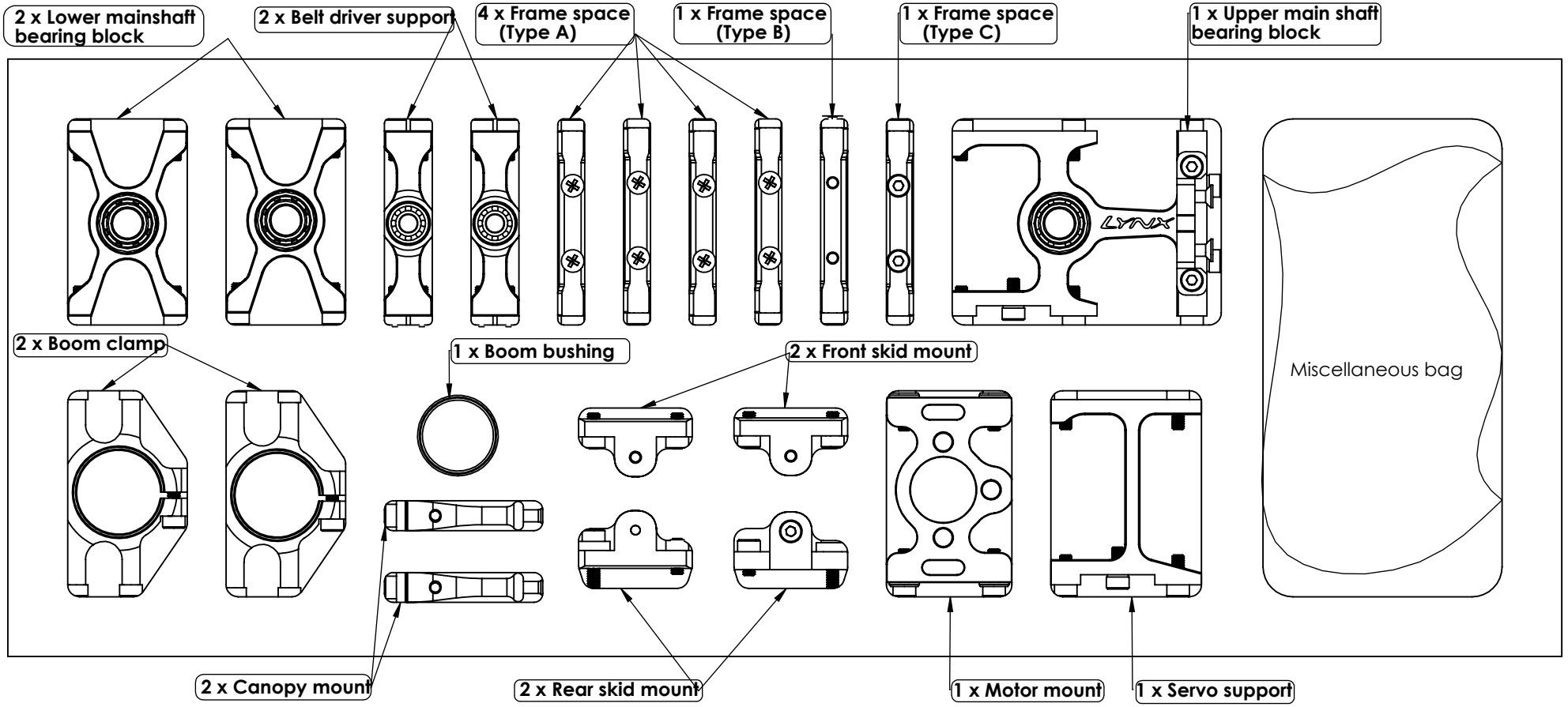






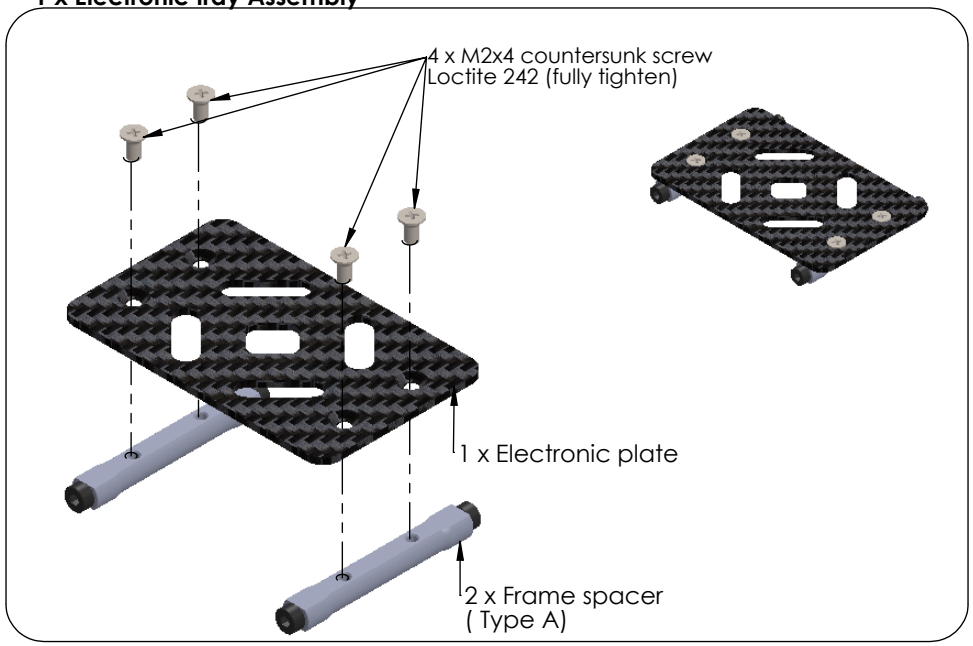
PRE ASSEMBLY KIT PARTS
FOAM SUPPORT BASE

- 1 x Electronic hook and loop 15mm x 250mm
- 8 x 4mm Linkage ball
- 3 x Servo rod 20mm
- 2 x M2x4 Countersunk phillip head cup screw
- 5 x M3x8 Bottom hex cap screw
- 2 x M2x8 Hex cap screw
- 2 x M2x6 Hex cap screw
- 8 x M2x5 Hex cap screw
- 2 x M2x4 Hex cap screw

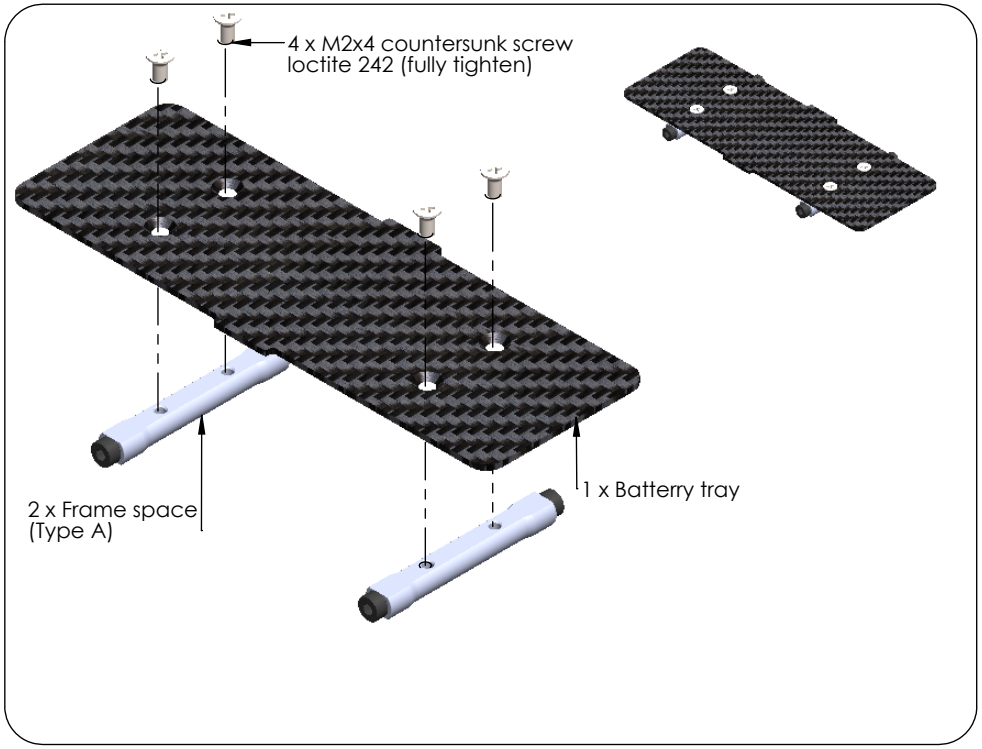

2 x Lower mainshaft bearing block
2 x Belt driver support
4 x Frame space (Type A)
1 x Frame space (Type B)
1 x Frame space (Type C)
1 x Upper main shaft bearing block
LYNX
2 x Boom clamp
1 x Boom bushing
2 x Front skid mount
Miscellaneous bag
2 x Canopy mount
2 x Rear skid mount
1 x Motor mount
1 x Servo support

ASSEMBLY STEP 1

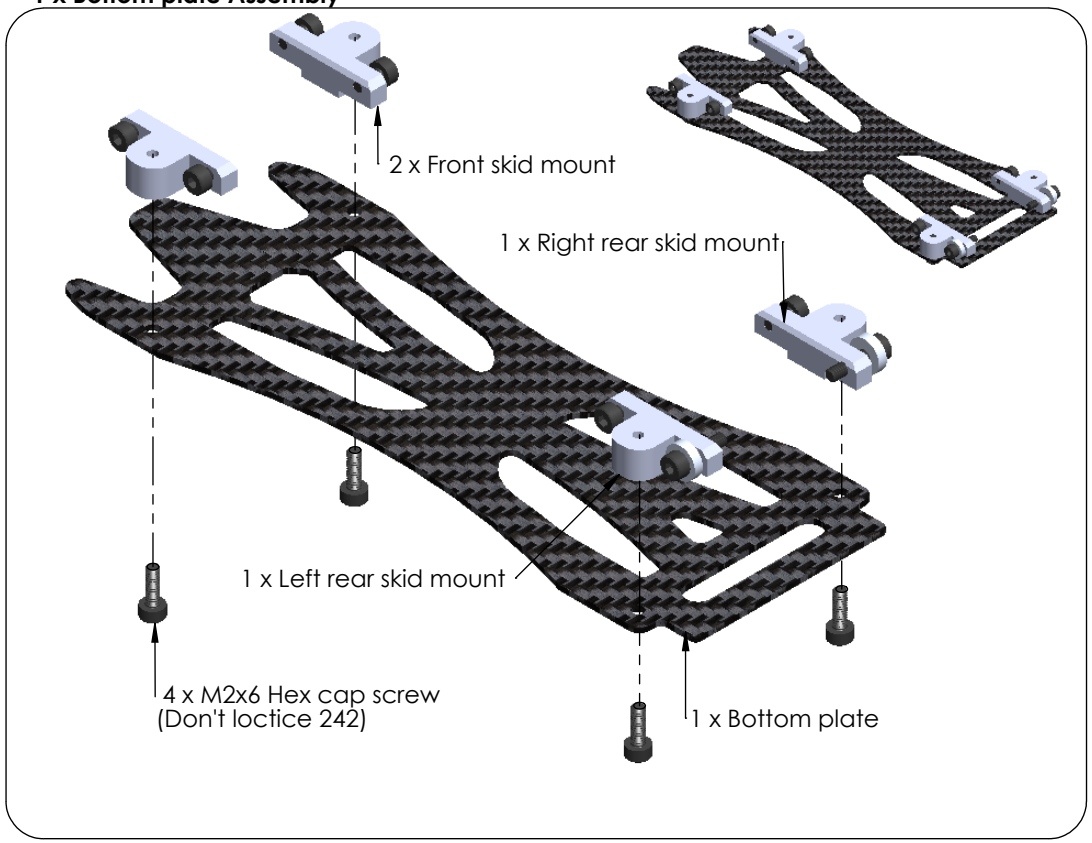
1 x Electronic tray Assembly



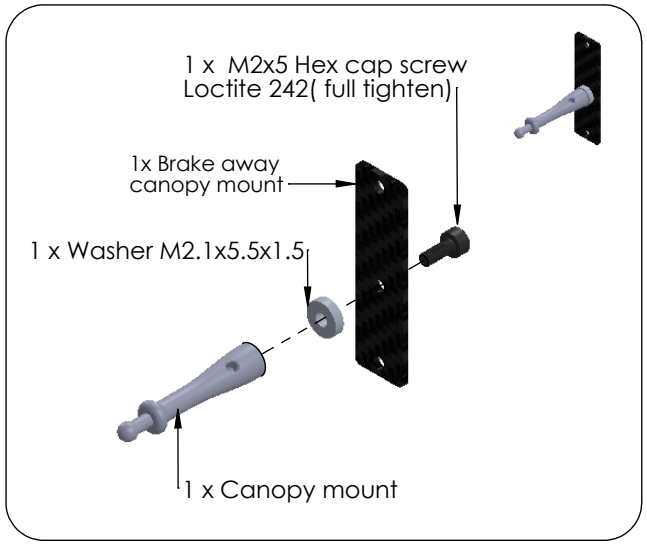
1 x Battery tray assembly



1 x Bottom plate Assembly



2 x Canopy mount



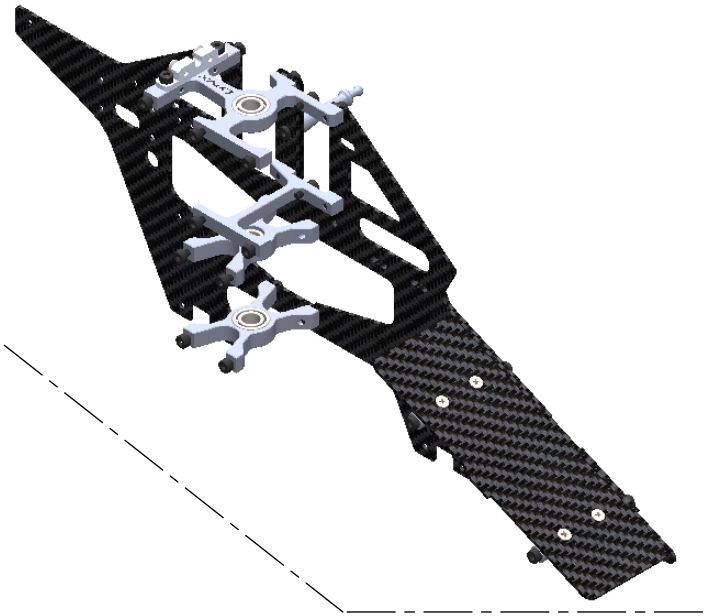
Parts Finder NOTE:
Use picture on page 3 and page 4 to find and select the necessary parts need.

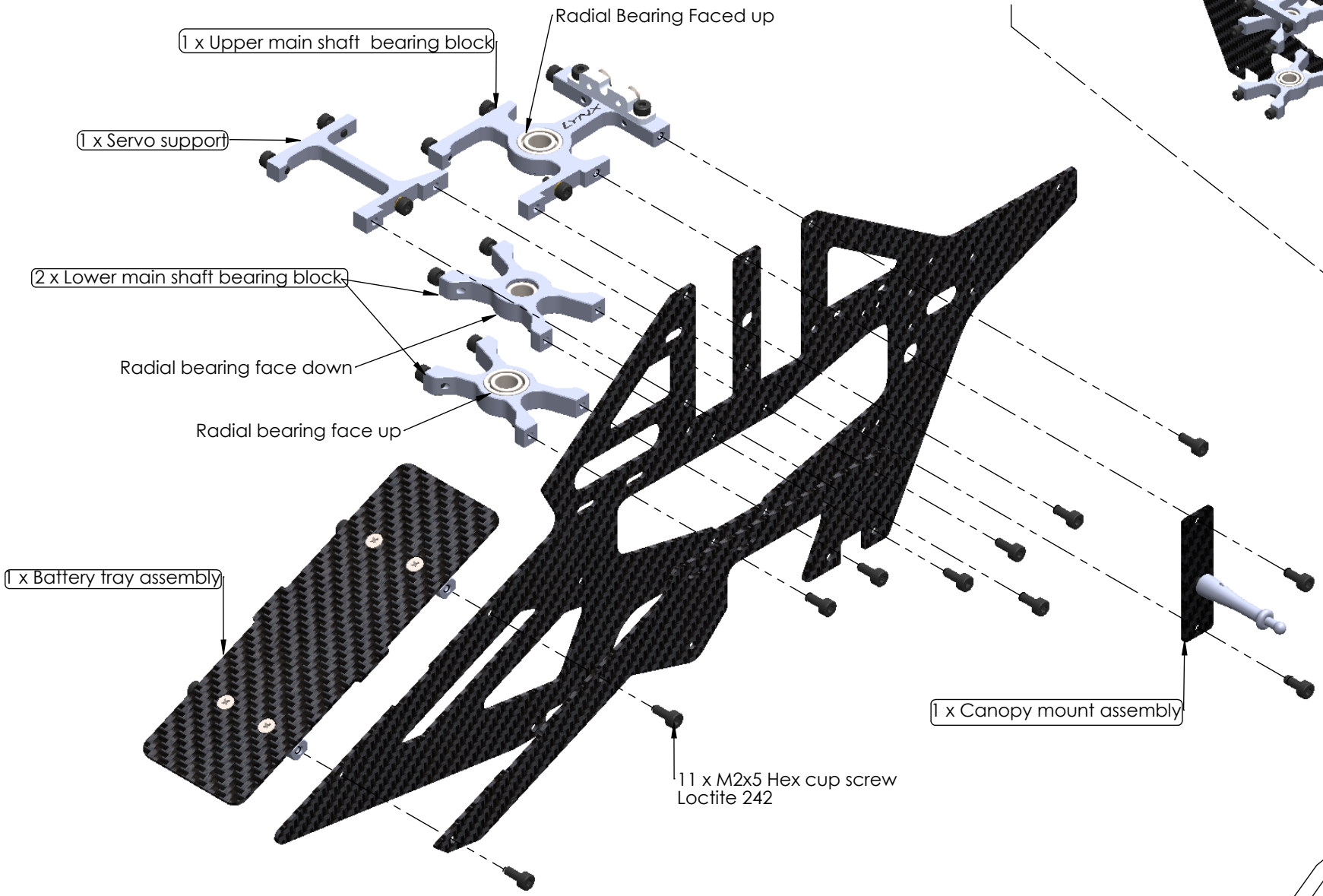
ASSEMBLY STEP 2

Note A: 3 x Bearing block screws use loctite 242, but don't fully tighten until both frames are together and the the main shaft is in position

Parts Finder NOTE:
Use picture on page 3 and page 4 to find and select the necessary parts need.

Assembly view




Radial Bearing Faced up
1 x Upper main shaft bearing block
1 x Servo support
2 x Lower main shaft bearing block
Radial bearing face down
Radial bearing face up
1 x Battery tray assembly
1 x Canopy mount assembly
11 x M2x5 Hex cup screw
Loctite 242

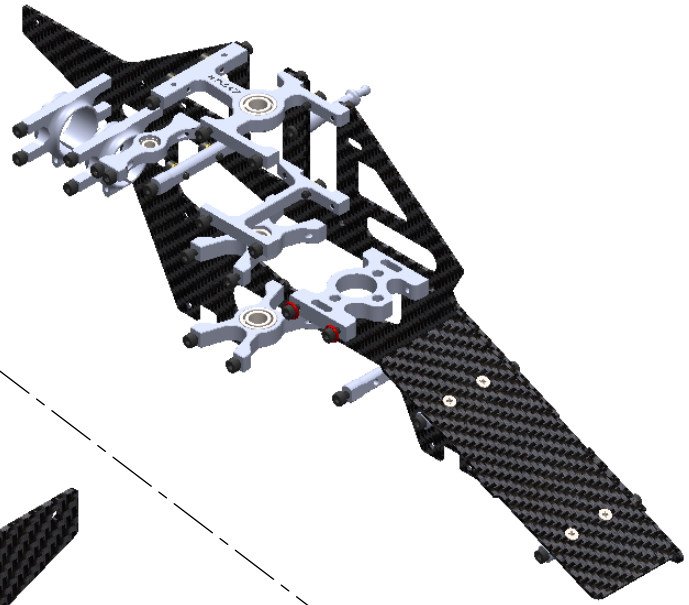
ASSEMBLY STEP 3

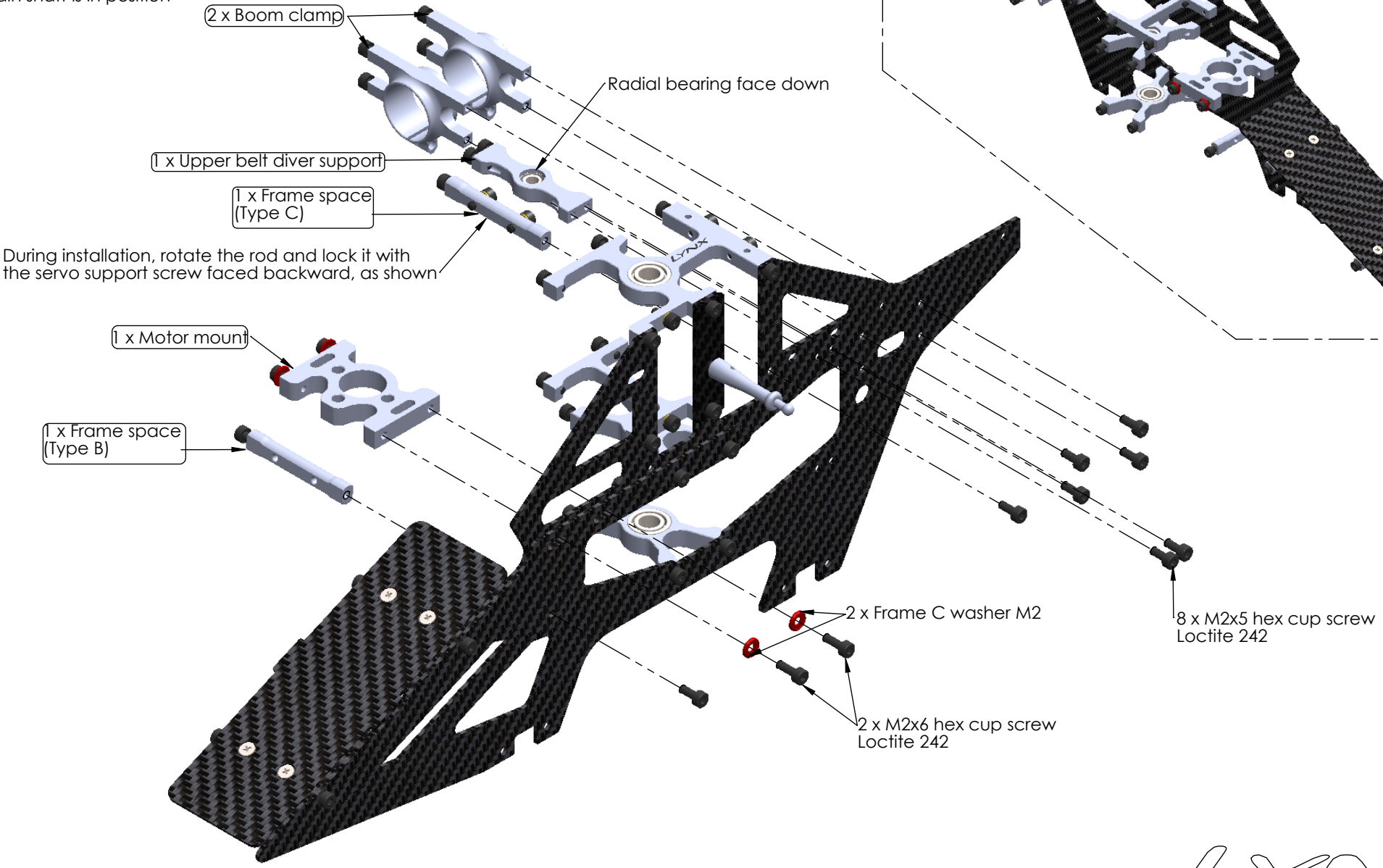
Note A: 1 x Motor mount screws use loctite 242, but don't fully tighten until the gear mesh is adjusted in a later step

Note B: 3 x Bearing block screws use loctite 242, but don't fully tighten until both frames are together and the the main shaft is in position

Parts Finder NOTE:
Use picture on page 3 and page 4 to find and select the necessary parts need.

Assembly view




2 x Boom clamp
Radial bearing face down
1 x Upper belt diver support
1 x Frame space (Type C)
During installation, rotate the rod and lock it with the servo support screw faced backward, as shown
1 x Motor mount
1 x Frame space (Type B)
2 x Frame C washer M2
8 x M2x5 hex cup screw Loctite 242
2 x M2x6 hex cup screw Loctite 242

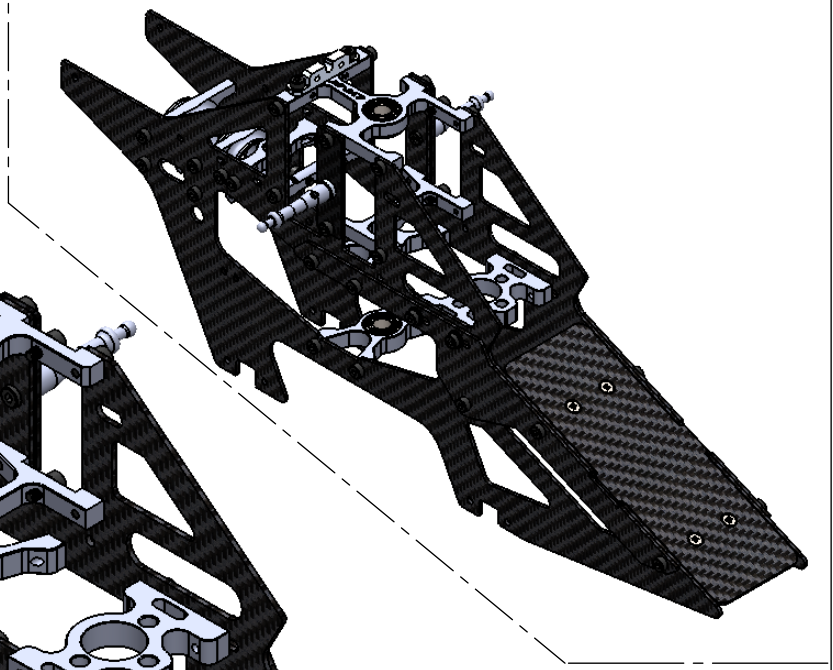
ASSEMBLY STEP 4

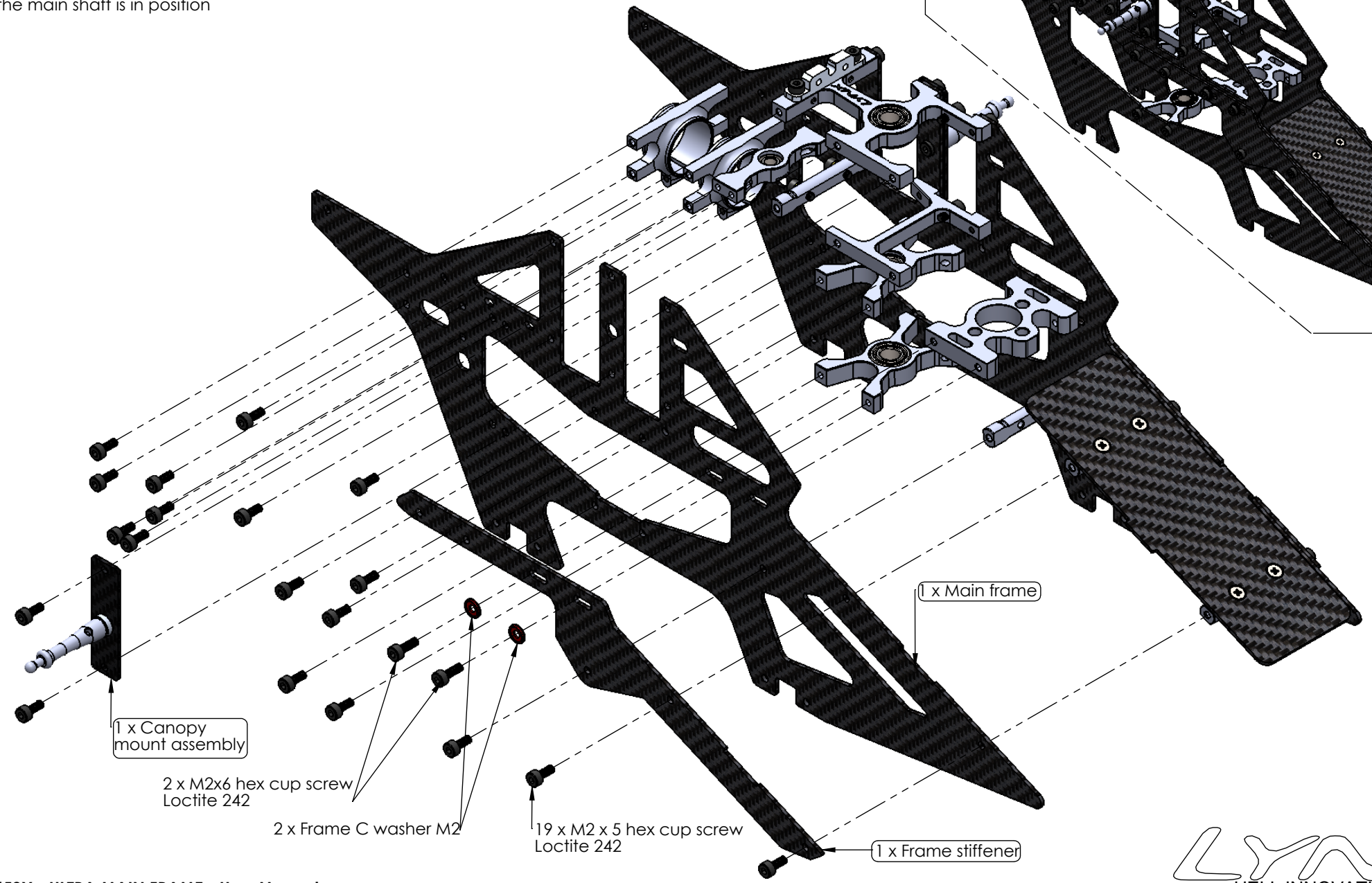
Note A:1 x Motor mount screws use loctite 242, but don't fully tighten until the gear mesh is adjusted in a later step

Note B: 1 x Bearing block screws use loctite 242, but don't fully tighten until both frames are together and the the main shaft is in position

Parts Finder NOTE:
Use picture on page 3 and page 4 to find and select the necessary parts need.

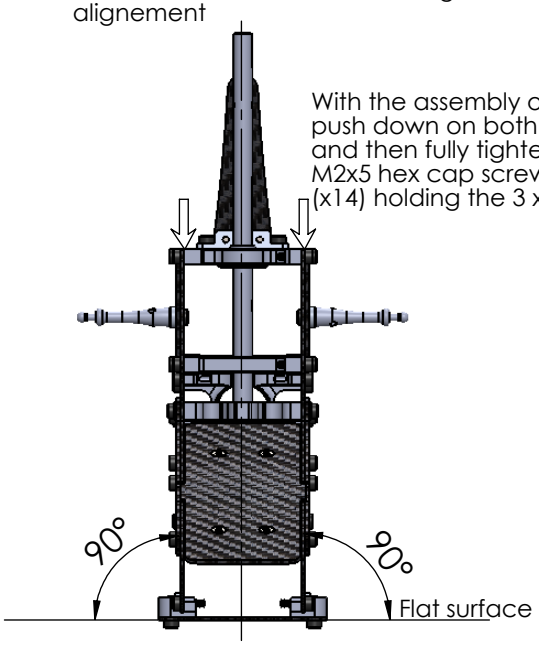
Assembly view



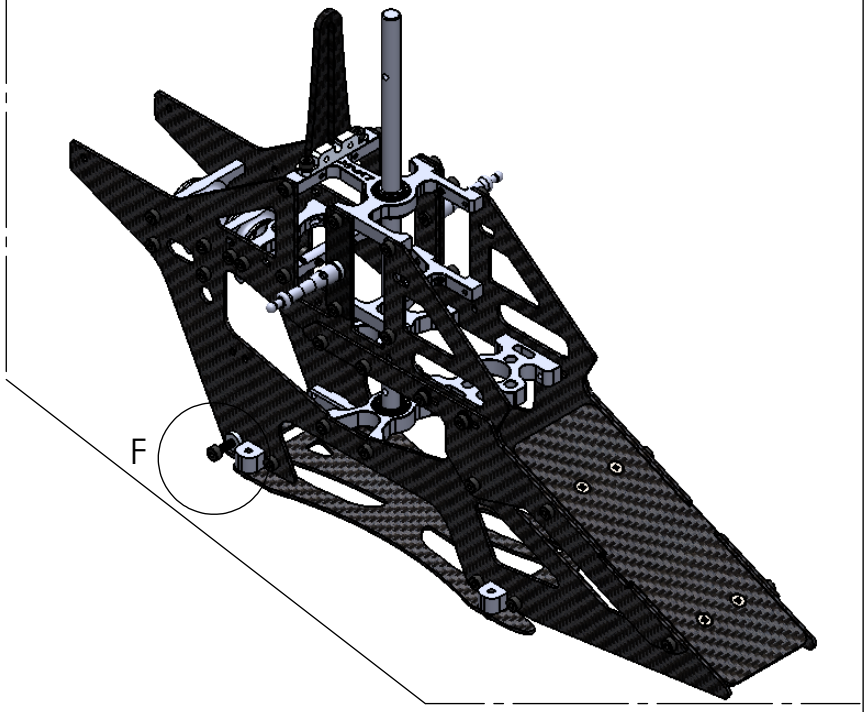

1 x Main frame
1 x Canopy mount assembly
2 x M2x6 hex cup screw Loctite 242
2 x Frame C washer M2
19 x M2 x 5 hex cup screw Loctite 242
1 x Frame stiffener

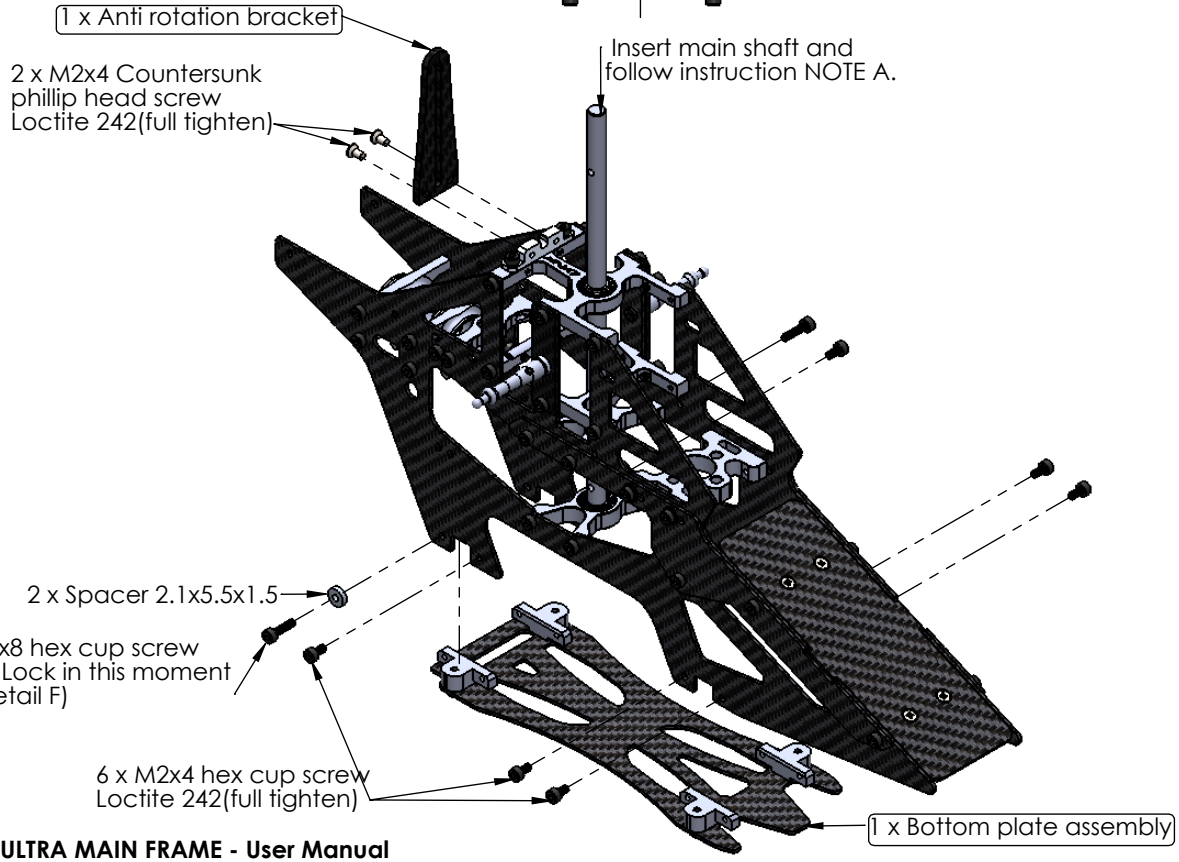
ASSEMBLY STEP 5

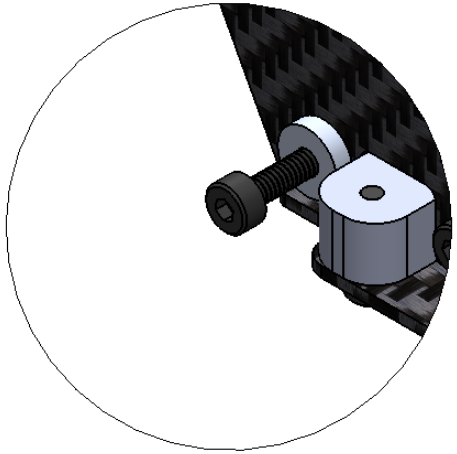
Note A: Main Frame and Bearing Block alignement


With the assembly on a flat surface, push down on both frames together and then fully tighten all M2x5 hex cap screws (x14) holding the 3 x bearing blocks
90°
90°
Flat surface

Assembly view




1 x Anti rotation bracket
2 x M2x4 Countersunk phillip head screw Loctite 242(full tighten)
Insert main shaft and follow instruction NOTE A.
2 x Spacer 2.1x5.5x1.5
2 x M2x8 hex cup screw (Don't Lock in this moment See Detail F)
6 x M2x4 hex cup screw Loctite 242(full tighten)
1 x Bottom plate assembly

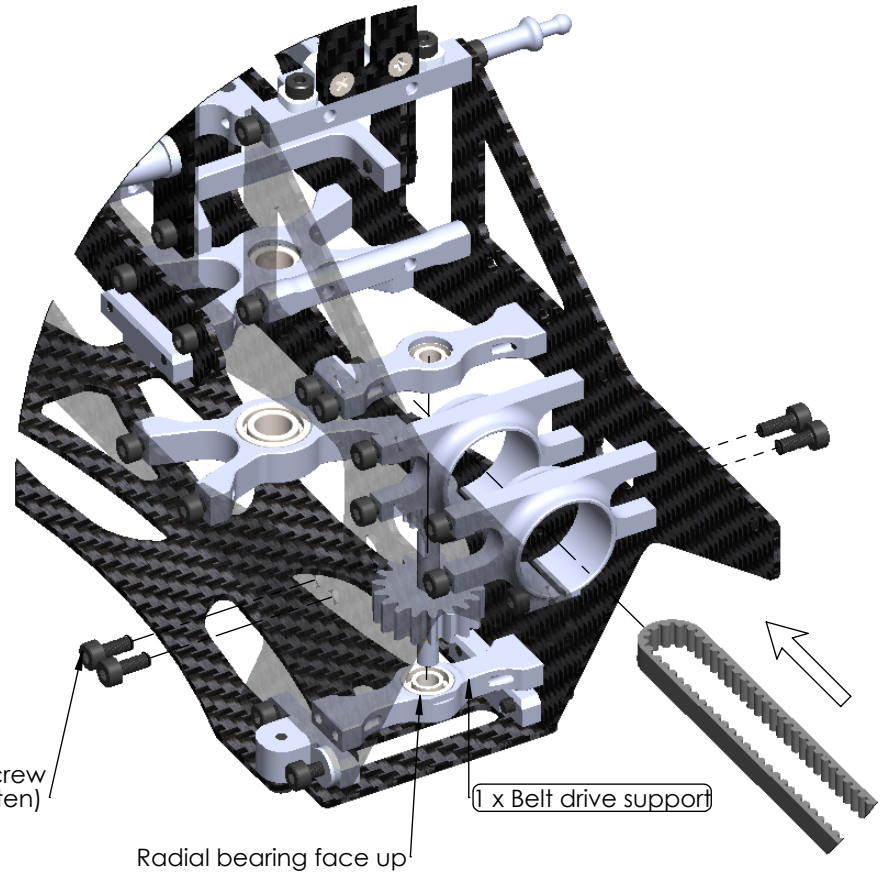


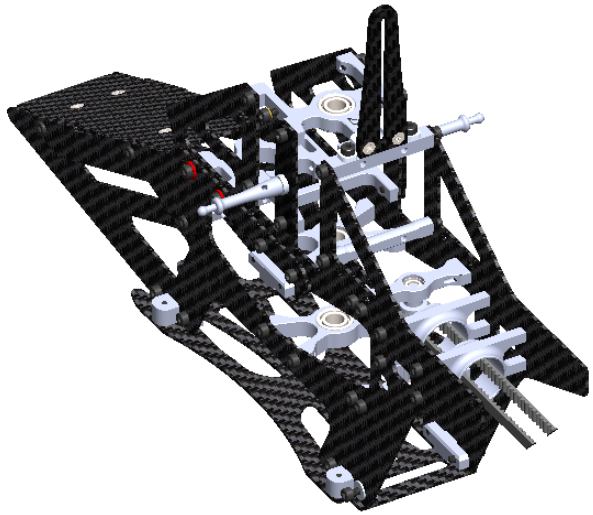
DETAIL F

ASSEMBLY STEP 6

Belt installation tips

Step 1 - Insert Tail Belt true the Boom Clamps
Step 2 - Operating with Bottom Frame on the top, insert standard Counter Shaft
Step 3 - Install Lower Belt Drive Support



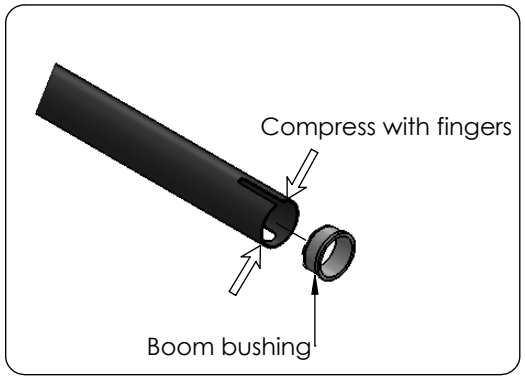


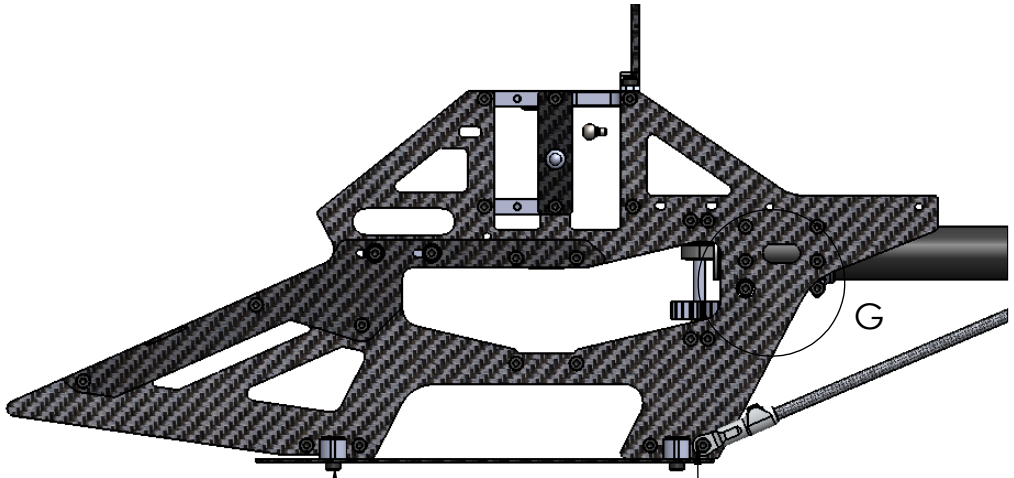
ASSEMBLY STEP 7

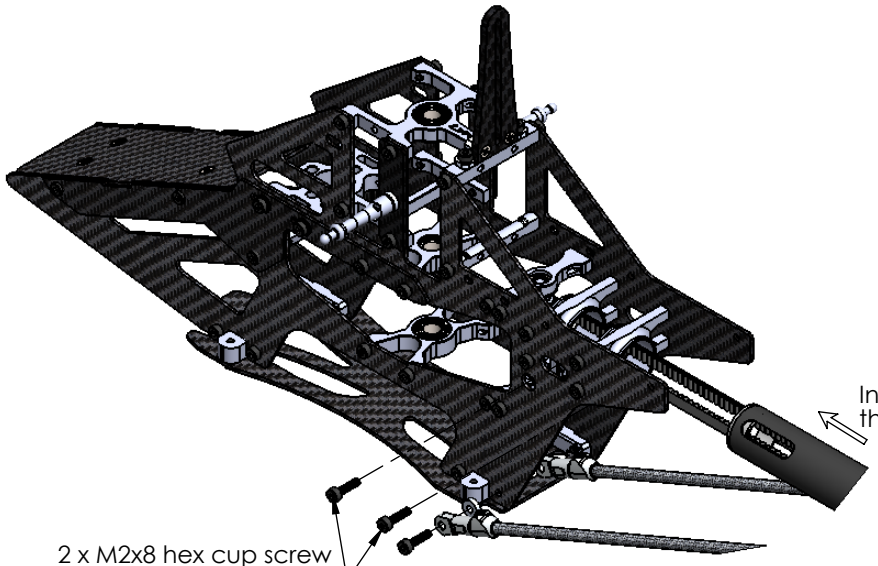
Installation boom

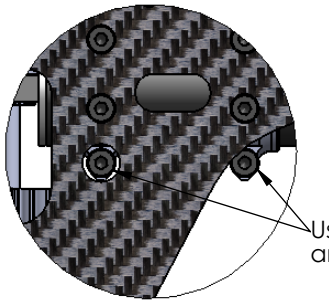
Boom bushing and boom install tips

Before bushings install, press with finger tail boom tip in order to get a lock fitting and avoid to loose the bushing during assembly.
This operation is necessary just for assembly proposal. After boom clamp lock the bushing will become parts of the boom.
Reuse this bushings in case of boom replacement.





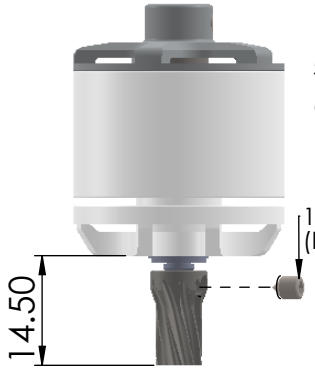




Detail G

ASSEMBLY STEP 8

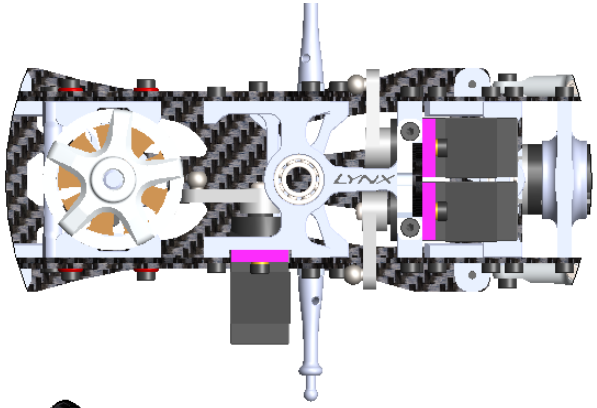
Motor and Pinion installation



Motor note:
The maximum motor diameter
can fit into Lynx 450X main frame is 29.5mm.
Lynx 450X motor mount have 16mm holes pattern.

1 x M3 x 4 set screw
(Install pinion using loctite 242 fully tighten)

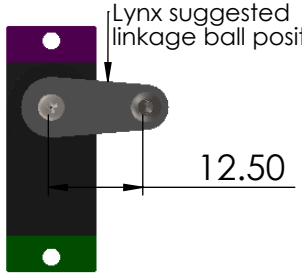
Adjust the pinion position as shown

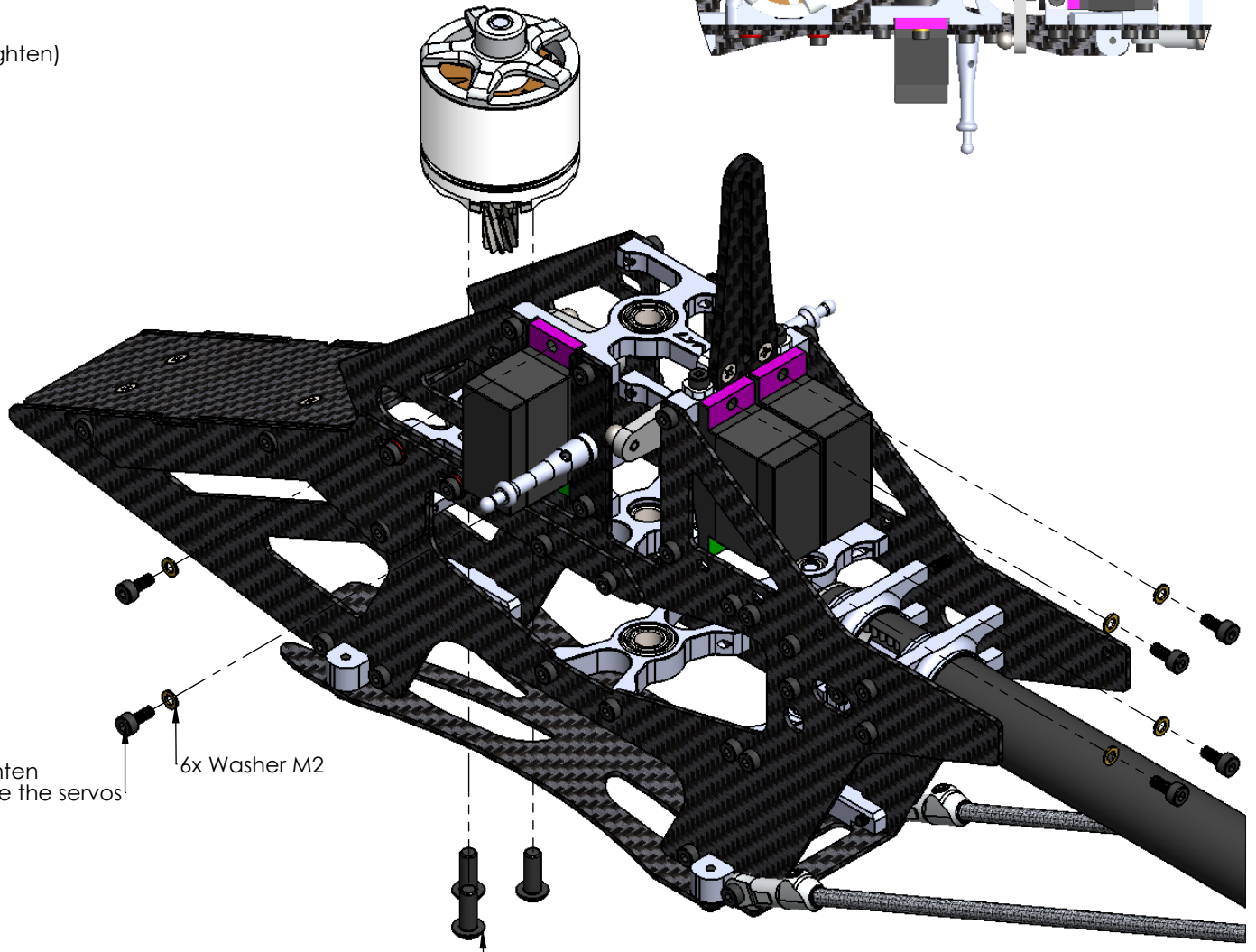


Servo Installation

Note 1 - Trim Servo Lever and install ball on the show position.

Note 2 - We recommend in this moment to identify
AIL - PIT - ELE servos position and using your FBL sytem, set the
center stick position and the 90 deg of the servo lever.
Lock servo lever with necessary screw. Add loctite 242.
Note 3 - Cyclic Servo need installed on the frame with
servo lever on top side as shown.

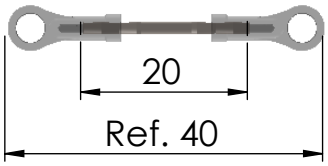




6 x M2x5 Hex cap screw
(use loctite 242)
Be careful not to over tighten
these screws and damage the servos

6x Washer M2

3 x servo linkage rod

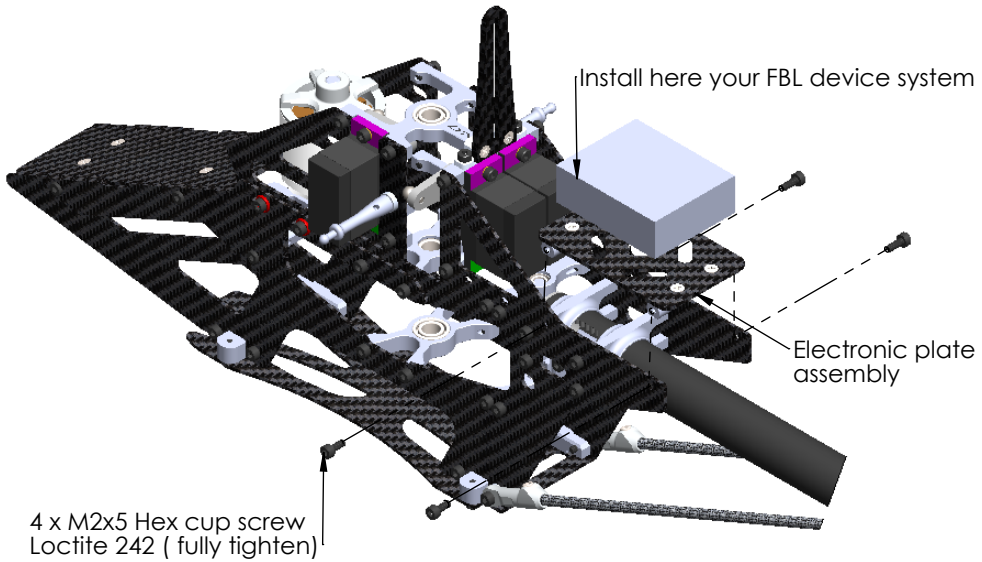


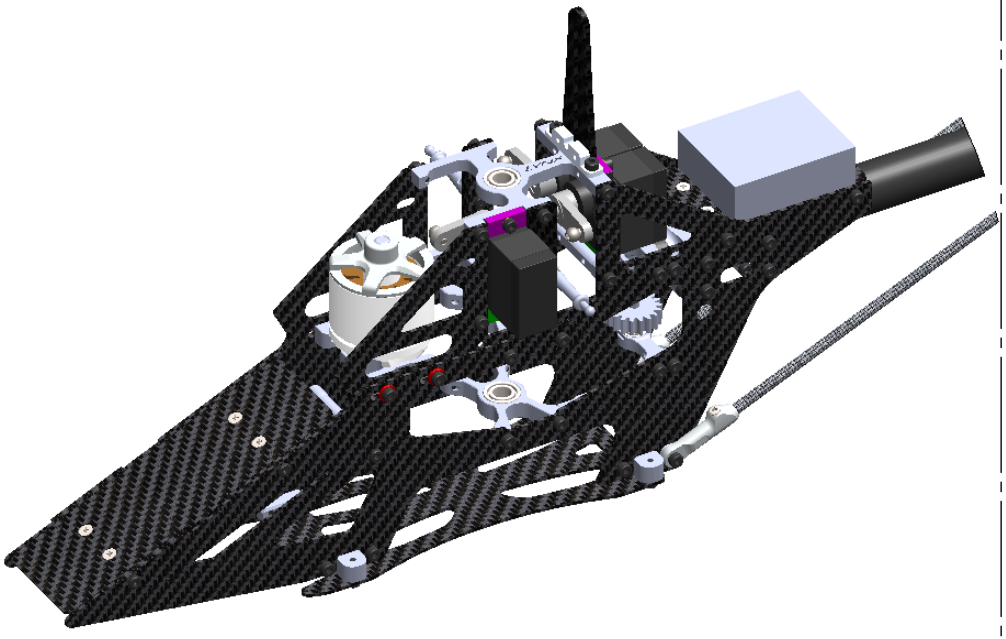
Start with this length dimension
and finalize the set up per need.

3 x M3 x 8 bottom hex cap screw
(use a small amount of loctite 242,
and tighten fully)

ASSEMBLY STEP 9

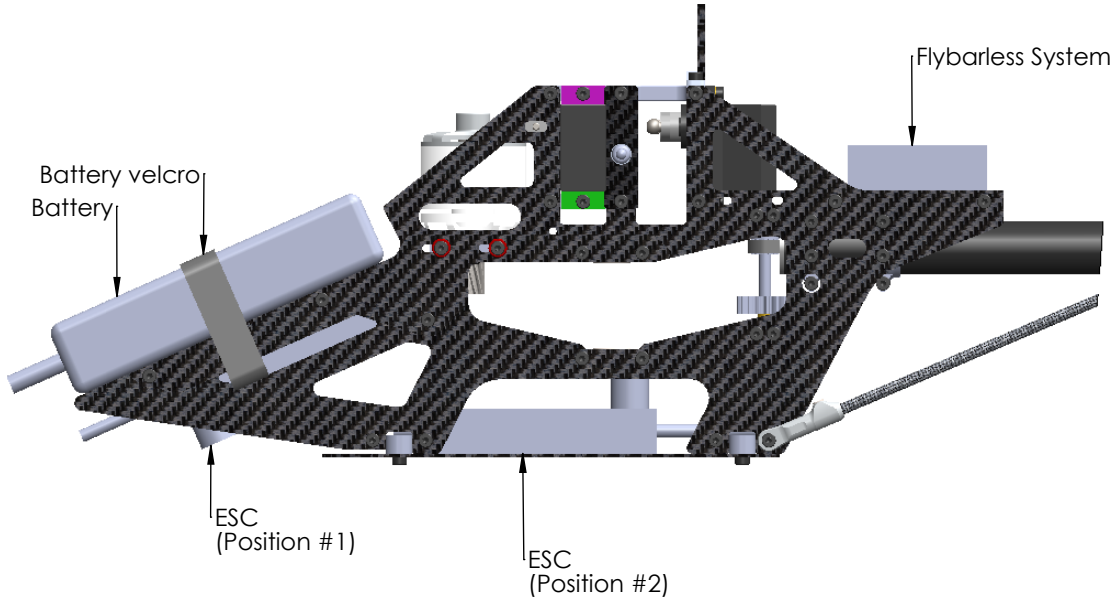
Electronic plate installation

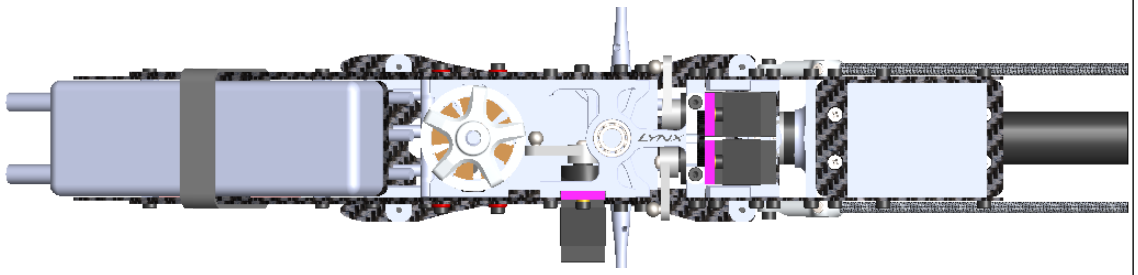




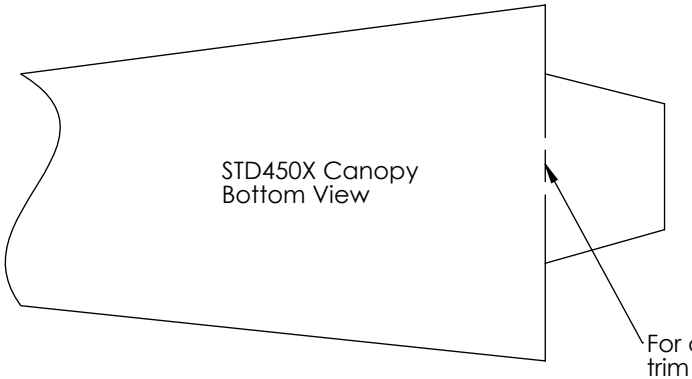
Assembly step 9

Electronics installation position

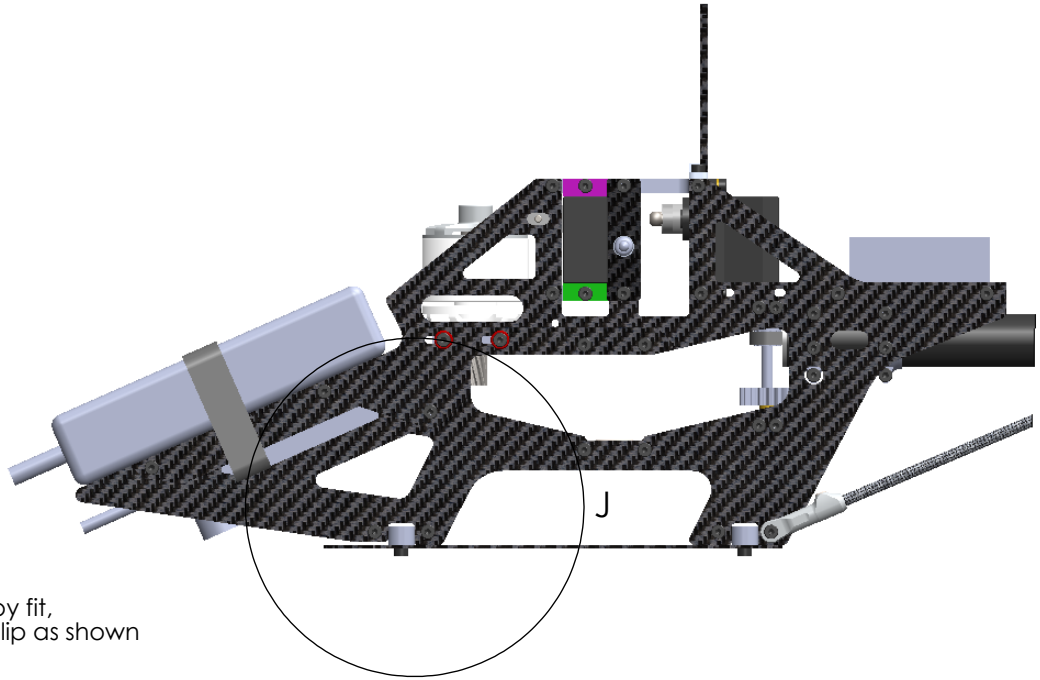


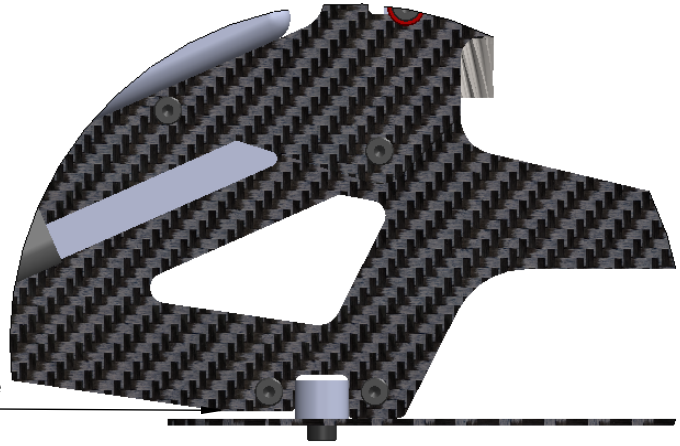


ASSEMBLY STEP 9
Canopy installation



For a perfect canopy fit,
trim off the canopy lip as shown





Insert the bottom of the
canopy into this recess

DETAIL J